## WHAT IS CLAIMED IS:

## 1. A compound having the general formula I:

Formula I

## wherein:

n is an integer of 1-6, whereas if n=1, Cn, Bn, Rn, R'n and Y are absent;

each of B<sub>1</sub>, B<sub>2</sub>, ...Bn-1 and Bn is independently selected from the group consisting of oxygen, sulfur, nitrogen, phosphor and silicon, whereby each of said nitrogen, phosphor and silicon is substituted by at least one substituent selected from the group consisting of hydrogen, lone pair electrons, alkyl, halo, cycloalkyl, aryl, hydroxy, thiohydroxy, alkoxy, aryloxy, thioaryloxy, thioalkoxy and oxo;

each of A<sub>1</sub>, A<sub>2</sub>, ...An-1 and An is independently selected from the group consisting of CR''R''', C=O and C=S,

Y is selected from the group consisting of hydrogen, alkyl, aryl, cycloalkyl, carboxy, saccharide, phosphoric acid, phosphoryl choline, phosphoryl ethanolamine, phosphoryl serine, phosphoryl cardiolipin, phosphoryl inositol, ethylphosphocholine, phosphorylmethanol, phosphorylethanol, phosphorylpropanol, phosphorylbutanol, phosphorylethanolamine-N-lactose, phosphoethanolamine-N-[methoxy(propylene glycol)], phosphoinositol-4-phosphate, phosphoinositol-4,5-

biposphonate, pyrophosphate, phosphoethanolamine-diethylenetriaminepentaacetate, dinitrophenyl-phosphoethanolamine and phsophoglycerol; and

each of  $X_1$ ,  $X_2$ , ...  $X_{n-1}$  is independently a saturated or unsaturated hydrocarbon having the general formula II:

Formula II

wherein:

m is an integer of 1-26; and

Z is selected from the group consisting of:

whereas:

W is selected from the group consisting of oxygen, sulfur, nitrogen and phosphor, whereby each of said nitrogen and phosphor is substituted by at least one substituent selected from the group consisting of hydrogen, lone pair electrons, alkyl, halo, cycloalkyl, aryl, hydroxy, thiohydroxy, alkoxy, aryloxy, thioaryloxy, thioalkoxy and oxo; and

in at least one of  $X_1, X_2, ... X_{n-1} Z$  is not hydrogen; and wherein:

each of R<sub>1</sub>, R'<sub>1</sub>, R<sub>2</sub>, ... Rn-1, Rn, R'n, each of R'' and R''' and each of Ra, R'a, Rb, R'b, ...Rm-1, R'm-1, Rm and R'm is independently selected from the group consisting of hydrogen, a bond, alkyl, alkenyl, alkylnyl, cycloalkyl, aryl, heteroaryl, heteroalicyclic, halo, trihalomethyl, hydroxy, alkoxy, aryloxy, thiohydroxy, thioalkoxy, thioaryloxy, phosphonate, phosphate, phosphinyl, sulfonyl, sulfonyl, sulfonamide, amide, carbonyl, thiocarbonyl, C-carboxy, O-carboxy, C-

carbamate, N-carbamate, C-thiocarboxy, S-thiocarboxy and amino, or, alternatively, at least two of R<sub>1</sub>, R'<sub>1</sub>, R2, ...Rn-1, Rn and R'n and/or at least two of Ra, R'a, Rb, R'b, ...Rm-1, R'm-1, Rm and R'm form at least one four-, five- or six-membered aromatic, heteroaromatic, alicyclic or heteroalicyclic ring; and

each of C<sub>1</sub>, C<sub>2</sub>, ..., Cn-1, Cn, and each of Ca, Cb, ... Cm-1 and Cm is a chiral or non-chiral carbon atom, whereby each chiral carbon atom has a S-configuration and/or a R-configuration,

a pharmaceutically acceptable salt, a prodrug, a hydrate or a solvate thereof.

- 2. The compound of claim 1, wherein at least one of  $A_1, A_2, ...$  and An-1 is CR''R'''.
- 3. The compound of claim 2, wherein at least one of said at least one of  $A_1$ ,  $A_2$ , ... and  $A_1$  is linked to a  $X_1$ ,  $X_2$  ... or  $X_1$  which comprises a Z different than hydrogen.
  - 4. The compound of claim 1, wherein n equals 3.
- 5. The compound of claim 4, wherein at least one of  $A_1$  and  $A_2$  is CR''R'''.
  - 6. The compound of claim 5, wherein  $A_2$  is CR''R'''.
  - 7. The compound of claim 5, wherein each of  $A_1$  and  $A_2$  is CR''R'''.
- 8. The compound of claim 4, wherein  $X_2$  comprises a Z different than hydrogen.
- 9. The compound of claim 8, wherein said Z is selected from the group w = c

- 10. The compound of claim 9, wherein W is oxygen and each of R" and R" is independently selected from the group consisting of hydrogen and alkyl.
  - 11. The compound of claim 1, wherein n equals 1.
- 12. The compound of claim 11, wherein at least one of  $R_1$  and  $R'_1$  is a phosphate or a phosphonate.
- 13. The compound of claim 1, wherein n equals 5 or 6 and at least one of R<sub>1</sub>, R'<sub>1</sub> and at least one of Rn and R'n form at least one heteroalicyclic ring.
- 14. The compound of claim 13, wherein said at least one heteroalicyclic ring is a monosaccharide ring.
- 15. A pharmaceutical composition comprising, as an active ingredient, the compound of claim 1 and a pharmaceutically acceptable carrier.
- 16. The pharmaceutical composition of claim 15, packaged in a packaging material and identified in print, in or on said packaging material, for use in the treatment or prevention of an inflammation associated with an endogenous oxidized lipid.
- 17. The pharmaceutical composition of claim 16, wherein said inflammation is associated with a disease or disorder selected from the group consisting of an idiopathic inflammatory disease or disorder, a chronic inflammatory disease or disorder, an acute inflammatory disease or disorder, an autoimmune disease or disorder, an infectious disease or disorder, an inflammatory malignant disease or disorder, an inflammatory transplantation-related disease or disorder, an inflammatory degenerative disease or disorder, a disease or disorder associated with a hypersensitivity, an inflammatory cardiovascular disease or disorder, an inflammatory cerebrovascular disease or disorder, a peripheral vascular disease or disorder, an inflammatory glandular disease or disorder, an inflammatory gastrointestinal disease or disorder, an inflammatory cutaneous disease or disorder, an inflammatory hepatic

disease or disorder, an inflammatory neurological disease or disorder, an inflammatory musculo-skeletal disease or disorder, an inflammatory renal disease or disorder, an inflammatory reproductive disease or disorder, an inflammatory systemic disease or disorder, an inflammatory connective tissue disease or disorder, an inflammatory tumor, necrosis, an inflammatory implant-related disease or disorder, an inflammatory aging process, an immunodeficiency disease or disorder, a proliferative disease or disorder and an inflammatory pulmonary disease or disorder.

- 18. The pharmaceutical composition of claim 17, wherein said hypersensitivity is selected from the group consisting of Type I hypersensitivity, Type II hypersensitivity, Type IV hypersensitivity, immediate hypersensitivity, antibody mediated hypersensitivity, immune complex mediated hypersensitivity, T lymphocyte mediated hypersensitivity, delayed type hypersensitivity, helper T lymphocyte mediated hypersensitivity, cytotoxic T lymphocyte mediated hypersensitivity, TH1 lymphocyte mediated hypersensitivity, and TH2 lymphocyte mediated hypersensitivity.
- 19. The pharmaceutical composition of claim 17, wherein said inflammatory cardiovascular disease or disorder is selected from the group consisting of an occlusive disease or disorder, atherosclerosis, a cardiac valvular disease, stenosis, restenosis, in-stent-stenosis, myocardial infarction, coronary arterial disease, acute coronary syndromes, congestive heart failure, angina pectoris, myocardial ischemia, thrombosis, Wegener's granulomatosis, Takayasu's arteritis, Kawasaki syndrome, anti-factor VIII autoimmune disease or disorder, necrotizing small vessel vasculitis, microscopic polyangiitis, Churg and Strauss syndrome, pauci-immune focal necrotizing glomerulonephritis, crescentic glomerulonephritis, antiphospholipid syndrome, antibody induced heart failure, thrombocytopenic purpura, autoimmune hemolytic anemia, cardiac autoimmunity, Chagas' disease or disorder, and anti-helper T lymphocyte autoimmunity.
- 20. The pharmaceutical composition of claim 17, wherein said cerebrovascular disease or disorder is selected from the group consisting of stroke,

cerebrovascular inflammation, cerebral hemorrhage and vertebral arterial insufficiency.

- 21. The pharmaceutical composition of claim 17, wherein said peripheral vascular disease or disorder is selected from the group consisting of gangrene, diabetic vasculopathy, ischemic bowel disease, thrombosis, diabetic retinopathy and diabetic nephropathy.
- 22. The pharmaceutical composition of claim 17, wherein said autoimmune disease or disorder is selected from the group consisting of chronic rheumatoid arthritis, juvenile rheumatoid arthritis, systemic lupus erythematosus, polyarteritis nodosa, connective tissue disease, scleroderma. mixed polymyositis/dermatomyositis, Sjogren's syndrome, Bechet's disease, multiple sclerosis, autoimmune diabetes, Hashimoto's disease, psoriasis, primary myxedema, pernicious anemia, myasthenia gravis, chronic active hepatitis , autoimmune hemolytic anemia, idiopathic thrombocytopenic purpura, uveitis, vasculitides and heparin induced thrombocytopenia.
- 23. The pharmaceutical composition of claim 17, wherein said inflammatory glandular disease or disorder is selected from the group consisting of pancreatic disease or disorder, Type I diabetes, thyroid disease or disorder, Graves' disease or disorder, thyroiditis, spontaneous autoimmune thyroiditis, Hashimoto's thyroiditis, idiopathic myxedema, ovarian autoimmunity, autoimmune anti-sperm infertility, autoimmune prostatitis and Type I autoimmune polyglandular syndrome.
- 24. The pharmaceutical composition of claim 17, wherein said inflammatory gastrointestinal disease or disorder is selected from the group consisting of colitis, ileitis, Crohn's disease, chronic inflammatory intestinal disease, inflammatory bowel syndrome, chronic inflammatory bowel disease, celiac disease, ulcerative colitis, an ulcer, a skin ulcer, a bed sore, a gastric ulcer, a peptic ulcer, a buccal ulcer, a nasopharyngeal ulcer, an esophageal ulcer, a duodenal ulcer and a gastrointestinal ulcer.

- 25. The pharmaceutical composition of claim 17, wherein said inflammatory cutaneous disease or disorder is selected from the group consisting of acne, autoimmune bullous skin disease or disorder, pemphigus vulgaris, bullous pemphigoid, pemphigus foliaceus, contact dermatitis and drug eruption.
- 26. The pharmaceutical composition of claim 17, wherein said inflammatory hepatic disease or disorder is selected from the group consisting of autoimmune hepatitis, hepatic cirrhosis, and biliary cirrhosis.
- 27. The pharmaceutical composition of claim 17, wherein said inflammatory neurological disease or disorder is selected from the group consisting of multiple sclerosis, Alzheimer's disease, Parkinson's disease, myasthenia gravis, motor neuropathy, Guillain-Barre syndrome, autoimmune neuropathy, Lambert-Eaton myasthenic syndrome, paraneoplastic neurological disease or disorder, paraneoplastic cerebellar atrophy, non-paraneoplastic stiff man syndrome, progressive cerebellar atrophy, Rasmussen's encephalitis, amyotrophic lateral sclerosis, Sydeham chorea, Gilles de la Tourette syndrome, autoimmune polyendocrinopathy, dysimmune neuropathy, acquired neuromyotonia, arthrogryposis multiplex, Huntington's disease, AIDS associated dementia, amyotrophic lateral sclerosis (AML), multiple sclerosis, stroke, an inflammatory retinal disease or disorder, an inflammatory ocular disease or disorder, optic neuritis, spongiform encephalopathy, migraine, headache, cluster headache, and stiff-man syndrome.
- 28. The pharmaceutical composition of claim 17, wherein said inflammatory connective tissue disease or disorder is selected from the group consisting of autoimmune myositis, primary Sjogren's syndrome, smooth muscle autoimmune disease or disorder, myositis, tendinitis, a ligament inflammation, chondritis, a joint inflammation, a synovial inflammation, carpal tunnel syndrome, arthritis, rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, a skeletal inflammation, an autoimmune ear disease or disorder, and an autoimmune disease or disorder of the inner ear.

- 29. The pharmaceutical composition of claim 17, wherein said inflammatory renal disease or disorder is autoimmune interstitial nephritis and/or renal cancer.
- 30. The pharmaceutical composition of claim 17, wherein said inflammatory reproductive disease or disorder is repeated fetal loss, ovarian cyst, or a menstruation associated disease or disorder.
- 31. The pharmaceutical composition of claim 17, wherein said inflammatory systemic disease or disorder is selected from the group consisting of systemic lupus erythematosus, systemic sclerosis, septic shock, toxic shock syndrome, and cachexia.
- 32. The pharmaceutical composition of claim 17, wherein said infectious disease or disorder is selected from the group consisting of a chronic infectious disease or disorder, a subacute infectious disease or disorder, an acute infectious disease or disorder, a viral disease or disorder, a bacterial disease or disorder, a protozoan disease or disorder, a parasitic disease or disorder, a fungal disease or disorder, a mycoplasma disease or disorder, gangrene, sepsis, a prion disease or disorder, influenza, tuberculosis, malaria, acquired immunodeficiency syndrome, and severe acute respiratory syndrome.
- 33. The pharmaceutical composition of claim 17, wherein said inflammatory transplantation-related disease or disorder is selected from the group consisting of graft rejection, chronic graft rejection, subacute graft rejection, acute graft rejection hyperacute graft rejection, and graft versus host disease or disorder.
- 34. The pharmaceutical composition of claim 33, wherein said implant is selected from the group consisting of a prosthetic implant, a breast implant, a silicone implant, a dental implant, a penile implant, a cardiac implant, an artificial joint, a bone fracture repair device, a bone replacement implant, a drug delivery implant, a catheter,

a pacemaker, an artificial heart, an artificial heart valve, a drug release implant, an electrode, and a respirator tube.

- 35. The pharmaceutical composition of claim 17, wherein said inflammatory tumor is selected from the group consisting of a malignant tumor, a benign tumor, a solid tumor, a metastatic tumor and a non-solid tumor.
- 36. The pharmaceutical composition of claim 17, wherein said inflammatory pulmonary disease or disorder is selected from the group consisting of asthma, allergic asthma, emphysema, chronic obstructive pulmonary disease or disorder, sarcoidosis and bronchitis.
- 37. The pharmaceutical composition of claim 15, further comprising at least one additional compound capable of treating or preventing an inflammation associated with an oxidized lipid.
- 38. The pharmaceutical composition of claim 37, wherein said at least one additional compound is selected from the group consisting of a HMGCoA reductase inhibitor (a statin), a mucosal adjuvant, a corticosteroid, a steroidal anti-inflammatory drug, a non-steroidal anti-inflammatory drug, an analgesic, a growth factor, a toxin, a HSP, a Beta-2-glycoprotein I, a cholesteryl ester transfer protein (CETP) inhibitor, a perixosome proliferative activated receptor (PPAR) agonist, an anti-atherosclerosis drug, an anti-proliferative agent, ezetimide, nicotinic acid, a squalen inhibitor, an ApoE Milano, and any derivative and analog thereof.
- 39. The pharmaceutical composition of claim 15, wherein at least one of  $A_1, A_2, ...$  and  $A_1$  is CR''R'''.
- 40. The pharmaceutical composition of claim 39, wherein at least one of said at least one of  $A_1$ ,  $A_2$ , ... and  $A_{n-1}$  is linked to a  $X_1$ ,  $X_2$  ... or  $X_{n-1}$  which comprises a Z different than hydrogen.

- 41. The pharmaceutical composition of claim 15, wherein n equals 3.
- 42. The pharmaceutical composition of claim 41, wherein at least one of  $A_1$  and  $A_2$  is CR''R'''.
  - 43. The pharmaceutical composition of claim 42, wherein  $A_2$  is CR"R".
- 44. The pharmaceutical composition of claim 42, wherein each of  $A_1$  and  $A_2$  is CR''R'''.
- 45. The pharmaceutical composition of claim 41, wherein  $X_2$  comprises a Z different than hydrogen.
- 46. The pharmaceutical composition of claim 45, wherein said Z is selected from the group consisting of  $\stackrel{\text{OR"}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}}}{\overset{\text{OR}}}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{O}}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{O}}}}}{\overset{\text{OR}}}{\overset{\text{OR}}{\overset{\text{OR}}{\overset{O}}}}{\overset{\text{OR}}{\overset{O}}}}{\overset{\text{OR}}}{\overset{\text{OR}}}{\overset{O}}}{\overset{O}}{\overset{O}}{\overset{O}}{\overset{O}}}{\overset{O}}{\overset{O}}{\overset{O}}}}{\overset{O}}{\overset{O}}{\overset{O}}}{\overset{O}}{\overset{O}}{\overset{$
- 47. The pharmaceutical composition of claim 46, wherein W is oxygen and each of R" and R" is independently selected from the group consisting of hydrogen and alkyl.
  - 48. The pharmaceutical composition of claim 15, wherein n equals 1.
- 49. The pharmaceutical composition of claim 48, wherein at least one of  $R_1$  and  $R'_1$  is a phosphate or a phosphonate.
- 50. The pharmaceutical composition of claim 15, wherein n equals 5 or 6 and at least one of  $R_1$ ,  $R'_1$  and at least one of  $R_1$  and  $R'_1$  form at least one heteroalicyclic ring.
- 51. The pharmaceutical composition of claim 50, wherein said at least one heteroalicyclic ring is a monosaccharide ring.

- 52. A method of treating or preventing an inflammation associated with an endogenous oxidized lipid, the method comprising administering to a subject in need thereof a therapeutically effective amount of at least one oxidized lipid, thereby treating or preventing the inflammatory disease or disorder associated with an endogenous oxidized lipid in said subject.
- 53. The method of claim 52, wherein said oxidized lipid is selected from the group consisting of an oxidized phospholipid, a platelet activating factor, a plasmalogen, a substituted or unsubstituted 3-30 carbon atoms hydrocarbon terminating with an oxidized group, an oxidized sphingolipid, an oxidized glycolipid, an oxidized membrane lipid, and any analog or derivative thereof.
- 54. The method of claim 52, wherein said oxidized lipid has the general formula I:

$$R_{1} \xrightarrow{C_{1}} C_{1} \xrightarrow{B_{1}} A_{1} \xrightarrow{X_{1}} X_{1}$$

$$R_{2} \xrightarrow{C_{2}} B_{2} \xrightarrow{A_{2}} X_{2}$$

$$R_{n-1} \xrightarrow{C_{n-1}} C_{n-1} \xrightarrow{B_{n-1}} A_{n-1} \xrightarrow{X_{n-1}} X_{n-1}$$

$$R_{n} \xrightarrow{C_{n}} C_{n} \xrightarrow{B_{n}} Y$$

Formula I

wherein:

n is an integer of 1-6, whereas if n=1, Cn, Bn, Rn, R'n and Y are absent; each of B<sub>1</sub>, B<sub>2</sub>, ...Bn-1 and Bn is independently selected from the group consisting of oxygen, sulfur, nitrogen, phosphor and silicon, whereby each of said nitrogen, phosphor and silicon is substituted by at least one substituent selected from the group consisting of hydrogen, lone pair electrons, alkyl, halo, cycloalkyl, aryl, hydroxy, thiohydroxy, alkoxy, aryloxy, thioaryloxy, thioalkoxy and oxo;

each of A<sub>1</sub>, A<sub>2</sub>, ...An-1 and An is independently selected from the group consisting of CR"R", C=O and C=S,

Y is selected from the group consisting of hydrogen, alkyl, aryl, cycloalkyl, carboxy, saccharide, phosphoric acid, phosphoryl choline, phosphoryl ethanolamine, phosphoryl serine, phosphoryl cardiolipin, phosphoryl inositol, ethylphosphocholine, phosphorylmethanol, phosphorylethanol, phosphorylpropanol, phosphorylbutanol, phosphorylethanolamine-N-lactose, phosphoethanolamine-N-[methoxy(propylene glycol)], phosphoinositol-4-phosphate, phosphoinositol-4,5-biposphonate, pyrophosphate, phosphoethanolamine-diethylenetriamine-pentaacetate, dinitrophenyl-phosphoethanolamine and phsophoglycerol; and

each of  $X_1$ ,  $X_2$ , ... $X_{n-1}$  is independently a saturated or unsaturated hydrocarbon having the general formula II:

Formula II

wherein:

m is an integer of 1-26; and

Z is selected from the group consisting of:

whereas W is selected from the group consisting of oxygen, sulfur, nitrogen and phosphor, whereby each of said nitrogen and phosphor is substituted by at least one substituent selected from the group consisting of hydrogen, lone pair electrons, alkyl, halo, cycloalkyl, aryl, hydroxy, thiohydroxy, alkoxy, aryloxy, thioaryloxy, thioalkoxy and oxo; and

at least one of  $X_1, X_2, ... X_{n-1}$  comprises a Z different than hydrogen and wherein:

each of R<sub>1</sub>, R'<sub>1</sub>, R<sub>2</sub>, ... Rn-1, Rn, R'n, each of R" and R" and each of Ra, R'a, Rb, R'b, ...Rm-1, R'm-1, Rm and R'm is independently selected from the group consisting of hydrogen, a bond, alkyl, alkenyl, alkylnyl, cycloalkyl, aryl, heteroaryl, halo, trihalomethyl, hydroxy, alkoxy, aryloxy, thiohydroxy, thioalkoxy, thioaryloxy, phosphonate, phosphate, phosphinyl, sulfonyl, sulfinyl, sulfonamide, amide, carbonyl, thiocarbonyl, C-carboxy, O-carboxy, C-carbamate, N-carbamate, C-thiocarboxy, S-thiocarboxy and amino, or, alternatively, at least two of R<sub>1</sub>, R'<sub>1</sub>, R2, ...Rn-1, Rn and R'n and/or at least two of Ra, R'a, Rb, R'b, ...Rm-1, Rm and R'm form at least one four-, five- or six-membered aromatic, heteroaromatic, alicyclic or heteroalicyclic ring; and

each of C<sub>1</sub>, C<sub>2</sub>, ..., Cn-1, Cn, and each of Ca, Cb, ... Cm-1 and Cm is a chiral or non-chiral carbon atom, whereby each chiral carbon atom has a S-configuration and/or a R-configuration,

a pharmaceutically acceptable salt, a prodrug, a hydrate or a solvate thereof.

- 55. The method of claim 54, wherein at least one of  $A_1, A_2, \ldots$  and  $A_{n-1}$  is  $C\dot{R}$ "R".
- 56. The method of claim 55, wherein at least one of said at least one of  $A_1$ ,  $A_2$ , ... and  $A_1$  is linked to a  $X_1$ ,  $X_2$  ... or  $X_1$  which comprises a Z different than hydrogen.
  - 57. The method of claim 54, wherein n equals 3.
- 58. The method of claim 57, wherein at least one of  $A_1$  and  $A_2$  is CR''R'''.
  - 59. The method of claim 58, wherein  $A_2$  is CR''R'''.

- 60. The method of claim 58, wherein each of A<sub>1</sub> and A<sub>2</sub> is CR"R".
- 61. The method of claim 57, wherein  $X_2$  comprises a Z different than hydrogen.
- 62. The method of claim 61, wherein said Z is selected from the group  $W = \begin{pmatrix} & & & \\$
- 63. The method of claim 62, wherein W is oxygen and each of R" and R" is independently selected from the group consisting of hydrogen and alkyl.
  - 64. The method of claim 54, wherein n equals 1.
- 65. The method of claim 64, wherein at least one of  $R_1$  and  $R'_1$  is a phosphate or a phosphonate.
- 66. The method of claim 54, wherein n equals 5 or 6, and at least one of R<sub>1</sub>, R'<sub>1</sub> and at least one of Rn and R'n form at least one heteroalicyclic ring.
- 67. The method of claim 66, wherein said at least one heteroalicyclic ring is a monosaccharide ring.
- 68. The method of claim 54, wherein said oxidized lipid is selected from the group consisting of: 1-palmitoyl-2-azelaoyl-sn-glycero-3-phosphocholine, 1hexadecyl-2-azelaoyl-sn-glycero-3-phosphocholine, 1-palmitoyl-2-glutaroyl-sn-(PGPC), 1-palmitoyl-2-(5-oxovaleroyl)-sn-glycero-3glycero-3-phosphocholine 1-palmitoyl-2-(9-oxononanoyl)-sn-glycero-3phosphocholine (POVPC), phosphocholine, 1-hexadecyl-2-acetoyl- sn-glycero-3-phosphocholine, 1-octadecyl-2-acetoyl-sn-glycero-3-phosphocholine, 1-hexadecyl-2-butyroyl-sn-glycero-3phosphocholine, 1-octadecyl-2-butyroyl-sn-glycero-3-phosphocholine, 1-palmitoyl-1-octadecenyl-2-acetoyl-sn-glycero-3-2-acetoyl-sn-glycero-3-phosphocholine,

phosphocholine, 1-hexadecyl-2-(homogammalinolenoyl)-sn-glycero-3phosphocholine, 1-hexadecyl-2-arachidonoyl- sn-glycero-3-phosphocholine, hexadecyl-2-eicosapentaenoyl-sn-glycero-3-phosphocholine, 1-hexadecyl-2docosahexaenoyl-sn-glycero-3-phosphocholine, 1-octadecyl-2-methyl-sn-glycero-3phosphocholine, 1-hexadecyl-2-butenoyl-sn-glycero-3-phosphocholine, Lyso PAF C16, Lyso PAF C18, 1-O-1'-(Z)-hexadecenyl-2-[12-[(7-nitro-2-1,3-benzoxadiazol-4-yl)amino]dodecanoyl]-sn-glycero-3-phosphocholine, 1-O-1'-(Z)-hexadecenyl-2oleoyl-sn-glycero-3-phosphocholine, 1-O-1'-(Z)-hexadecenyl-2-arachidonoyl-snglycero-3-phosphocholine, 1-O-1'-(Z)-hexadecenyl-2-docosahexaenoyl-sn-glycero-1-O-1'-(Z)-hexadecenyl-2-oleoyl-sn-glycero-3-3-phosphocholine, 1-O-1'-(Z)-hexadecenyl-2-arachidonoyl-sn-glycero-3phosphoethanolamine, phosphoethanolamine, and 1-O-1'-(Z)-hexadecenyl-2-docosahexaenoyl-sn-glycero-3- phosphoethanolamine.

69. The method of claim 52, wherein said inflammation is associated with a disease or disorder selected from the group consisting of an idiopathic inflammatory disease or disorder, a chronic inflammatory disease or disorder, an acute inflammatory disease or disorder, an autoimmune disease or disorder, an infectious disease or disorder, an inflammatory malignant disease or disorder, an inflammatory transplantation-related disease or disorder, an inflammatory degenerative disease or disorder, a disease or disorder associated with a hypersensitivity, an inflammatory cardiovascular disease or disorder, an inflammatory cerebrovascular disease or disorder, a peripheral vascular disease or disorder, an inflammatory glandular disease. or disorder, an inflammatory gastrointestinal disease or disorder, an inflammatory cutaneous disease or disorder, an inflammatory hepatic disease or disorder, an inflammatory neurological disease or disorder, an inflammatory musculo-skeletal disease or disorder, an inflammatory renal disease or disorder, an inflammatory reproductive disease or disorder, an inflammatory systemic disease or disorder, an inflammatory connective tissue disease or disorder, an inflammatory tumor, necrosis, an inflammatory implant-related disease or disorder, an inflammatory aging process, an immunodeficiency disease or disorder and an inflammatory pulmonary disease or disorder.

- The method of claim 69, wherein said hypersensitivity is selected from the group consisting of Type I hypersensitivity, Type II hypersensitivity, Type III hypersensitivity, Type IV hypersensitivity, immediate hypersensitivity, antibody mediated hypersensitivity, immune complex mediated hypersensitivity, T lymphocyte mediated hypersensitivity, delayed type hypersensitivity, helper T lymphocyte mediated hypersensitivity, cytotoxic T lymphocyte mediated hypersensitivity, TH1 lymphocyte mediated hypersensitivity, and TH2 lymphocyte mediated hypersensitivity.
- 71. The method of claim 69, wherein said inflammatory cardiovascular disease or disorder is selected from the group consisting of an occlusive disease or disorder, atherosclerosis, a cardiac valvular disease, stenosis, restenosis, in-stentstenosis, myocardial infarction, coronary arterial disease, acute coronary syndromes, congestive heart failure, angina pectoris, myocardial ischemia, thrombosis, Wegener's granulomatosis, Takayasu's arteritis, Kawasaki syndrome, anti-factor VIII autoimmune disease or disorder, necrotizing small vessel vasculitis, microscopic polyangiitis, Churg and Strauss syndrome, pauci-immune focal necrotizing glomerulonephritis, crescentic glomerulonephritis, antiphospholipid syndrome, antibody induced heart failure, thrombocytopenic purpura, autoimmune hemolytic anemia, cardiac autoimmunity, Chagas' disease or disorder, and anti-helper T lymphocyte autoimmunity.
- 72. The method of claim 69, wherein said cerebrovascular disease or disorder is selected from the group consisting of stroke, cerebrovascular inflammation, cerebral hemorrhage and vertebral arterial insufficiency.
- 73. The method of claim 69, wherein said peripheral vascular disease or disorder is selected from the group consisting of gangrene, diabetic vasculopathy, ischemic bowel disease, thrombosis, diabetic retinopathy and diabetic nephropathy.
- 74. The method of claim 69, wherein said autoimmune disease or disorder is selected from the group consisting of chronic rheumatoid arthritis, juvenile

rheumatoid arthritis, systemic lupus erythematosus, scleroderma, mixed connective tissue disease, polyarteritis nodosa, polymyositis/dermatomyositis, Sjogren's syndrome, Bechet's disease, multiple sclerosis, autoimmune diabetes, Hashimoto's disease, psoriasis, primary myxedema, pernicious anemia, myasthenia gravis, chronic active hepatitis, autoimmune hemolytic anemia, idiopathic thrombocytopenic purpura, uveitis, vasculitides and heparin induced thrombocytopenia.

- 75. The method of claim 69, wherein said inflammatory glandular disease or disorder is selected from the group consisting of pancreatic disease or disorder, Type I diabetes, thyroid disease or disorder, Graves' disease or disorder, thyroiditis, spontaneous autoimmune thyroiditis, Hashimoto's thyroiditis, idiopathic myxedema, ovarian autoimmunity, autoimmune anti-sperm infertility, autoimmune prostatitis and Type I autoimmune polyglandular syndrome.
- 76. The method of claim 69, wherein said inflammatory gastrointestinal disease or disorder is selected from the group consisting of colitis, ileitis, Crohn's disease, chronic inflammatory intestinal disease, inflammatory bowel syndrome, chronic inflammatory bowel disease, celiac disease, ulcerative colitis, an ulcer, a skin ulcer, a bed sore, a gastric ulcer, a peptic ulcer, a buccal ulcer, a nasopharyngeal ulcer, an esophageal ulcer, a duodenal ulcer and a gastrointestinal ulcer.
- 77. The method of claim 69, wherein said inflammatory cutaneous disease or disorder is selected from the group consisting of acne, autoimmune bullous skin disease or disorder, pemphigus vulgaris, bullous pemphigoid, pemphigus foliaceus, contact dermatitis and drug eruption.
- 78. The method of claim 69, wherein said inflammatory hepatic disease or disorder is selected from the group consisting of autoimmune hepatitis, hepatic cirrhosis, and biliary cirrhosis.
- 79. The method of claim 69, wherein said inflammatory neurological disease or disorder is selected from the group consisting of multiple sclerosis,

Alzheimer's disease, Parkinson's disease, myasthenia gravis, motor neuropathy, Guillain-Barre syndrome, autoimmune neuropathy, Lambert-Eaton myasthenic syndrome, paraneoplastic neurological disease or disorder, paraneoplastic cerebellar atrophy, non-paraneoplastic stiff man syndrome, progressive cerebellar atrophy, Rasmussen's encephalitis, amyotrophic lateral sclerosis, Sydeham chorea, Gilles de la Tourette syndrome, autoimmune polyendocrinopathy, dysimmune neuropathy, acquired neuromyotonia, arthrogryposis multiplex, Huntington's disease, AIDS associated dementia, amyotrophic lateral sclerosis (AML), multiple sclerosis, stroke, an inflammatory retinal disease or disorder, an inflammatory ocular disease or disorder, optic neuritis, spongiform encephalopathy, migraine, headache, cluster headache, and stiff-man syndrome.

- 80. The method of claim 69, wherein said inflammatory connective tissue disease or disorder is selected from the group consisting of autoimmune myositis, primary Sjogren's syndrome, smooth muscle autoimmune disease or disorder, myositis, tendinitis, a ligament inflammation, chondritis, a joint inflammation, a synovial inflammation, carpal tunnel syndrome, arthritis, rheumatoid arthritis, osteoarthritis, ankylosing spondylitis, a skeletal inflammation, an autoimmune ear disease or disorder, and an autoimmune disease or disorder of the inner ear.
- 81. The method of claim 69, wherein said inflammatory renal disease or disorder is autoimmune interstitial nephritis and/or renal cancer.
- 82. The method of claim 69, wherein said inflammatory reproductive disease or disorder is repeated fetal loss, ovarian cyst, or a menstruation associated disease or disorder.
- 83. The method of claim 69, wherein said inflammatory systemic disease or disorder is selected from the group consisting of systemic lupus erythematosus, systemic sclerosis, septic shock, toxic shock syndrome, and cachexia.

- 84. The method of claim 69, wherein said infectious disease or disorder is selected from the group consisting of a chronic infectious disease or disorder, a subacute infectious disease or disorder, an acute infectious disease or disorder, a viral disease or disorder, a bacterial disease or disorder, a protozoan disease or disorder, a parasitic disease or disorder, a fungal disease or disorder, a mycoplasma disease or disorder, gangrene, sepsis, a prion disease or disorder, influenza, tuberculosis, malaria, acquired immunodeficiency syndrome, and severe acute respiratory syndrome.
- 85. The method of claim 69, wherein said inflammatory transplantationrelated disease or disorder is selected from the group consisting of graft rejection, chronic graft rejection, subacute graft rejection, acute graft rejection hyperacute graft rejection, and graft versus host disease or disorder.
- 86. The method of claim 85, wherein said implant is selected from the group consisting of a prosthetic implant, a breast implant, a silicone implant, a dental implant, a penile implant, a cardiac implant, an artificial joint, a bone fracture repair device, a bone replacement implant, a drug delivery implant, a catheter, a pacemaker, an artificial heart, an artificial heart valve, a drug release implant, an electrode, and a respirator tube.
- 87. The method of claim 69, wherein said inflammatory tumor is selected from the group consisting of a malignant tumor, a benign tumor, a solid tumor, a metastatic tumor and a non-solid tumor.
- 88. The method of claim 69, wherein said inflammatory pulmonary disease or disorder is selected from the group consisting of asthma, allergic asthma, emphysema, chronic obstructive pulmonary disease or disorder, sarcoidosis and bronchitis.

- 89. The method of claim 52, further comprising administering to said subject a therapeutically effective amount of at least one additional compound capable of treating or preventing said inflammation.
- 90. The method of claim 89, wherein said at least one additional compound is selected from the group consisting of a HMGCoA reductase inhibitor (a statin), a mucosal adjuvant, a corticosteroid, a steroidal anti-inflammatory drug, a non-steroidal anti-inflammatory drug, an analgesic, a growth factor, a toxin, a HSP, a Beta-2-glycoprotein I, a cholesteryl ester transfer protein (CETP) inhibitor, a perixosome proliferative activated receptor (PPAR) agonist, an anti-atherosclerosis drug, an anti-proliferative agent, ezetimide, nicotinic acid, a squalen inhibitor, an ApoE Milano, and any derivative and analog thereof.